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PART 1
SCOPE OF WORK

In an effort to deal with increasing congestion levels on Turnpike mainline sections and toll plazas, the Pennsylvania Turnpike Commission is considering the possible implementation of some form of value pricing on its facilities. This study would build upon preliminary analyses of value pricing conducted by Wilbur Smith Associates (WSA) as part of previous studies. It will consider possible future toll pricing strategies that have potential to:

- Provide an economic incentive to shift traffic out of peak travel periods;
- Provide an economic incentive to encourage use of electronic toll collection (ETC);
- Promote the safe and efficient movement of traffic on the Turnpike; and
- Enhance traffic and revenue growth on the Turnpike to meet forecasted needs.

The heaviest areas of congestion on the Turnpike System are in the Philadelphia region, followed by the Pittsburgh region. The value pricing strategies themselves will be focused in these two areas, including the main East-West Turnpike as well as a portion of the Northeast Extension. However, pricing strategies to encourage use of E-ZPass will be considered "Turnpike-wide". In addition, the study will be performed in parallel with a separate study evaluating options for relieving truck traffic in the PA 41 – U.S. 30 – PA 283 corridor, primarily in Lancaster County. Close coordination will be maintained between the two studies, particularly recognizing that pricing strategies could be one of the options considered for encouraging shifts of truck traffic to the Turnpike between Harrisburg and Philadelphia.

PROJECT PHASES

The overall Pennsylvania Turnpike Value Pricing Pilot Project will actually consist of three separate project phases, as shown in Exhibit 1. Phase 1 involves the basic feasibility study and evaluation of value pricing options for the Turnpike. This will build directly on the preliminary work performed by WSA and will include extensive market research and outreach, a much more detailed traffic and socioeconomic impact analysis, identification of alternative pricing strategies, development of preliminary plans and cost estimates, a review of toll technology considerations and more.

The results of most analytical steps in Phase 1 would be documented in a study report, which would be submitted approximately six months following notice-to-proceed. In addition to documenting study results, it would include recommendations for the pilot project or projects which should be tested on the Pennsylvania Turnpike. Once decisions are reached to proceed with the pilot demonstration, some additional tasks in Phase 1 would also be conducted, such as a general environmental assessment, development of a detailed marketing program for the Phase 2 demonstration project and a Phase 2 scope of work, including monitoring and evaluation procedures.

Phase 2 would involve the actual implementation of the pilot program, beginning about one year after the overall study process begins. The consultant team would be heavily involved in the monitoring and evaluation of actual impacts associated with implementation of the value pricing pilot program(s), including traffic and revenue impacts, improvements in operating conditions and determining if certain program refinements would improve the effectiveness of the value pricing strategies. One of the most important elements of Phase 2 is the implementation of various marketing strategies to enhance the effectiveness of the value pricing strategies, both in terms of demand management and in encouraging use of E-ZPass across the Turnpike. Follow-up "revealed" preference surveys would also be undertaken during Phase 2 to determine the extent to which motorists behavior after value pricing implementation agreed with market research performed before the programs were implemented.

Phase 2 would also last approximately one year. At the conclusion of this phase another study report would be submitted, documenting results of the effectiveness of the pilot demonstration program. Based on the results of the one year demonstration, decisions would be reached by the commission regarding final implementation of one or more of the pricing

strategies. If decisions are made to go forward, Phase 3 would involve the final implementation phase of the value pricing program on designated Turnpike facilities.

The scope of work in this proposal focuses on Phase 1, the Basic Study and Evaluation process. As noted below, one of the tasks in Phase 1 would be the development of a proposed work scope for Phase 2, which would be subject to joint agency review and approval prior to proceeding with Phase 2.

PROJECT STUDY SECTIONS

In general, the study would cover the entire Turnpike mainline, from Ohio to New Jersey and the entire Northeast Extension. Pricing strategies aimed at encouraging EZ-Pass utilization (i.e. differential pricing between cash and E-ZPass) would likely be implemented systemwide.

The congestion pricing strategies, i.e. those strategies in which toll rates would vary by time of day, would likely be focused in the urban areas of Philadelphia and Pittsburgh. In the Philadelphia region, the area of coverage would extent along the Turnpike Mainline from Interchange 23 (Downingtown) to Interchange 30 (Delaware River Bridge). It would also include the portion of the Northeast Extension from the mid-county Interchange (25A) to Interchange 33 (Lehigh Valley). This area encompasses over 84 miles, including both the Mainline and Northeast Extension portions.

The study area in the Pittsburgh region would extend from Interchange 3 (Cranbury) to Interchange 8 (New Stanton), a distance of about 39 miles.

In addition to the two primary urban areas, the study will closely coordinate with a parallel study aimed at looking for alternative routes for trucks now using the P.A. 283, U.S. 30, P.A. 41 corridor. This could involve special pricing strategies for commercial vehicles to encourage a shift out of the Lancaster area and onto the Turnpike for truck travel between the Port of Wilmington and nearby locations and Harrisburg and points west. An evaluation of potential truck pricing strategies would be conducted, if needed, during the course of the study, depending on activities and options arising from the parallel Lancaster County study. The potential areas of influence of truck pricing for that part of the work would extend from Interchange 16 (Carlisle) to Interchange 23 (Downingtown).

PHASE 1 TASKS

As shown in Exhibit 2, the Phase 1 work program would include the following 15 tasks:

- Task 1: Baseline Traffic and Operating Conditions Profile;
- Task 2: Market Research Surveys and Studies;
- Task 3: Variable Pricing Program Options and Preliminary Impact Estimates;
- Task 4: Refined Variable Pricing Program Options and Impact Estimates;
- Task 5: Evaluation of Fare Collection System Capability to Accommodate Variable Pricing;
- Task 6: Coordination;
- Task 7: Cost Estimates;
- Task 8: Preliminary Plans and Engineer's Estimate;
- Task 9: Study Report, Including Recommended Pilot Projects;
- Task 10: Scope of Work for Phase 2;
- Task 11: Monitoring and Evaluation Plan for Phase 2;
- Task 12: Environmental Clearance/Permits;
- Task 13: Preliminary Public Outreach and Marketing for Phase 2;
- Task 14: Project Management; and
- Task 15: Meetings.

Exhibit 2 shows the overall orientation of the Phase 1 work plan. The study will begin with development of the baseline traffic and operations profile, both on and off the Pennsylvania Turnpike. The market research surveys and studies will also commence immediately following receipt of notice-to-proceed, since this Task will provide important inputs into the analytical phases of the work. The initial identification of value pricing options in preliminary analysis will then be conducted followed by a more refined evaluation of a short list of preferred value pricing options in Task 5. The evaluation of fare collection issues and capabilities would be performed in parallel, along with the development of preliminary plans and cost estimates. All of this would culminate in the development of a study report, including recommended Phase 2 pilot projects.

Upon authorization from the project management team, WSA would then proceed with the development of a work scope for Phase 2 (Task 10) in the monitoring and evaluation plan (Task 11) a general assessment of environmental clearance/permit requirements would be made in Task 12.

The detailed market research and outreach conducted in Task 2 would then be used as direct input into the development of a much more detailed

marketing plan for Phase 2, in Task 13. A more detailed breakdown of the market research and marketing program tasks are provided in subsequently in another exhibit.

Finally, several tasks will continue throughout the course of the Phase 1 work, including Task 6 coordination with other agencies and other studies, Task 14 (project management) and Task 15, which will include monthly status meetings and other meetings during the course of the project.

TASK 1: BASELINE TRAFFIC AND OPERATING CONDITIONS

The purpose of this task will be to establish a baseline traffic and operating conditions profiled for the Turnpike, and competitive facilities, prior to implementation of value pricing. This will include detailed measurements of current toll plaza operating conditions as well as travel time and congestion studies on the Turnpike mainline sections themselves.

WSA has already performed an extensive toll plaza operations analysis as part of our ongoing Turnpike operations study. Baseline data, before implementation of E-ZPass, was obtained at several major plazas in the areas which would be potentially affected by value pricing. New observations would be obtained at the outset of this study, which would provide an important baseline against which measurements of future improvements due to value pricing would be compared. However, this would also provide a useful "before and after" comparison to operating conditions before the implementation of E-ZPass, as well.

Updated traffic and revenue statistical information will be obtained for the entire Turnpike system, including all toll plazas. This will include entry and exit data, including hourly variations, as well as the current mix of traffic between cash and electronic toll collection. WSA maintains most of this data base as part of ongoing studies, but this would be updated to ensure that we have the latest available information.

At all toll plazas in the urban areas which would be subjected to the value pricing analysis (as defined above) WSA would collect updated information on current toll plaza operating conditions, including arrival rates, queue lengths and average vehicle delays. This would be obtained in both the entering and exiting direction. In addition to WSA staff, maximum use would be made of our local (DBE) subconsultants in collecting this important baseline information.

Extensive travel time speed and delay studies would be conducted during both peak and off-peak periods on the Turnpike and principle off-Turnpike facilities. Multiple speed-delay runs would be conducted in each travel

direction on all sections of the Turnpike in the value pricing study area. In addition, travel time runs would be made during shoulder hours and off-peak hours, to obtain a clear operating profile of existing traffic operations, to go along with the detailed toll plaza operations review discussed above.

In addition to traffic counts on the Turnpike itself, available counts would be obtained on non-Turnpike facilities as well to provide a baseline against which future traffic impacts of value pricing can be measured. WSA will obtain all available counts from DVRPC, SPC and any other agencies, before undertaking new counts on off-Turnpike facilities. It is possible that some value pricing strategies may result in diversions to alternative routes. Off-Turnpike impact assessments would be limited to major intersections/interchanges in the vicinity of toll plazas. Where necessary, new machine traffic counts or limited turning movement counts would be obtained at critical locations.

WSA would revisit all of the existing toll plazas, connecting roadways and the Turnpike mainline to identify any constraints which might impact the effectiveness of value pricing. In our ongoing Operations study, for example, a number of locations were identified where off-Turnpike traffic constraints would limit the benefits of improved toll plaza operations due to backups from local roads. These would be carefully inventoried and updated, particularly in view of any improvements which may have resulted from the implementation of E-ZPass.

Aerial photography would be taken at each toll plaza in each of the "Value Pricing" analysis areas. Up to 3-4 photos would be taken at each plaza, in both a.m. and p.m. peak conditions. This will be useful in the toll plaza impact assessment and provide a basis of comparison before and after value pricing.

At the conclusion of this task, a technical memorandum would be submitted which would document the baseline operating conditions both on and off the Turnpike. This would also be included in the final study report.

TASK 2: MARKET RESEARCH SURVEYS AND STUDIES

The primary objective of any pricing strategy, such as value pricing, is to influence motorist behavior, be that travel time or payment mode preference. Critical to estimating traffic and revenue impacts of pricing strategies is market research aimed at determining motorists' willingness, and ability, to shift travel time or other potential responses which might be expected in response to the pricing strategy.

In the preliminary value pricing study for the Turnpike, WSA used very limited market research, which essentially amounted to a few questions included in a systemwide origin-destination survey. This study would include a much more detailed market research effort, the bulk of which will be conducted as part of Task 2. Successful completion of this market research will be critical to proper estimation of potential motorist responses and identification of both pricing strategies and the magnitude of price differentials needed to achieve demand management objectives.

Task 2 will include a range of market research efforts, the most significant of which will be a stated preference survey specifically designed to estimate motorists' behavior. This task will also include focus group and other surveys of employers, trucking companies and others to aide in establishing the demand management elasticities which will be used in the traffic and revenue impact analysis.

Task 2 will also include early marketing efforts for the project, generally increasing awareness and helping solicit motorists' input into the outreach process. A much more detailed marketing effort would be undertaken at the conclusion of Phase 1 and as part of Phase 2.

Stated Preference Survey

The following describes how the team proposes to collect survey data and statistically analyze those data to develop that information. The two major components of this effort will be: 1) the collection of stated preference travel survey data and 2) statistical estimation of a logit-form route choice model which yields value of time estimates and related time shift elasticities.

The proposed travel survey will include detailed traveler interviews conducted using a sophisticated computer-based survey instrument. The computer-based instrument allows stated preference experiments to be constructed in a way that reflects realistic alternatives for each individual respondent, reflecting the details of their actual trip characteristics. This approach ensures that the responses to the stated preference experiments will be as close as possible to actual behavior under the conditions tested. The interview will consist of five major elements:

1) *Questions to establish current travel characteristics* – These questions will include basic information about where travelers went on their most recent trip within the study corridors, when they

made the trip, what their travel purpose was and what level of service they experienced. This information is both used as a "revealed preference" observation and as a context for the adaptive stated preference questions that follow.

2) *Overview of potential pricing strategies* – including affected portions of the Turnpike, potential benefits, possible strategies and potential responses. Information on E-ZPass will also be discussed.

3) *Stated preference experiments* – A set of stated preference experiments will be designed to determine how travelers react to the proposed pricing strategies under different travel time and toll conditions. The stated preference experiments will be dynamically adapted so that they are realistic options for the trip that the respondent described. The experiments will be designed in a way that will allow them to be used to support estimation of a logit-form route choice model and, in turn, estimate values of time and time shift elasticities.

4) *De-brief questions* – Following the stated preference experiments, respondents will be asked to explain why they made the choices that they made – particularly for the cases where they always chose a certain alternative. This information is valuable in determining the factors beyond the service conditions that affect choices.

5) *Respondent information* – Information will be requested about the individual such as car ownership, area of residence, employment, gender, income and other demographic factors that might influence choices.

The SP survey could be administered using some type of paper survey at toll plazas, as suggested in the PTC work scope. However, it may be preferable to conduct the survey using a self-administered computer-based instrument. Resource Systems Group's IVIS survey system will be used to program the questionnaire. IVIS was developed in 1991 as the first advanced adaptive multimedia touchscreen computer-based survey system. It has been used for over 100 major travel surveys and many other surveys for major international corporations. The system has been enhanced over the past decade to include real-time statistical estimation, an integrated Geographic Information System (GIS), Internet administration options and many other advanced features. Sample screens from a recent stated preference survey on the Tappan Zee Bridge are shown in Exhibit 3.

Survey Administration

Participants for the survey will be recruited using several complementary approaches. Postcards or fliers inviting customers to participate in the survey will be distributed to a sample of cash customers at the toll plazas. The invitations will include a web address and password for those who are able to complete the questionnaire over the Internet and will include information about completing the questionnaire for those who do not have Internet access. E-Z Pass customers will be recruited using either phone contacts or at activity center (shopping malls, major employers, etc.) intercepts. The questionnaire will take approximately ten minutes to complete and will be designed, as have all previous IVIS surveys, so that anyone with or without prior computer experience can easily complete the questionnaire. The survey will be administered both over the Internet and by field staff at kiosks in major activity centers throughout the study areas, such as shopping malls, office buildings, government offices, other workplaces and hotels. At intercept locations, participants would be screened to identify Pennsylvania Turnpike users.

Travel Route and Time-of-Day Model Estimation

Coefficients of a logit-form travel route and time-of-day choice model will be statistically estimated using data from the stated preference survey. These models are typically developed for pre-defined segments. The coefficients of the estimated models can then be used to calculate values of time by segment. However, Resource Systems Group has also developed a Bayesian statistical approach that allows multinomial logit models to be developed for each individual in the sample. This type of estimation is useful in describing the distribution of values of time across the population and in doing post-hoc segmentation to determine, for example, those segments who may be most receptive to changing the time of their travel.

Resource Systems Group will apply its substantial past experience to the specification and estimation of these new models.

Develop survey questionnaire

A written script of the survey questionnaire will be developed, containing the five basic elements described earlier. The questionnaire will be

designed in a way which is consistent with the key modeling objectives and which is straightforward for respondents.

The initial draft of the survey questionnaire will be provided for staff review and comment. The questionnaire will be revised in response to these comments and the revised draft used.

A survey plan will be developed that ensures coverage of the Turnpike travelers in the study's corridors. As described above, the survey administration will be designed as a multi-method approach. This approach has been very successfully used by this project team in several major past value pricing projects.[1]

If a computerized approach is used, the survey questionnaire will be programmed using Resource Systems Group's IVIS™ system. This system provides a graphical user interface and sophisticated dynamic branching to improve the efficiency and cost-effectiveness of stated preference data collection. The survey questionnaire will be programmed to be administered both as a web-based instrument and on laptop computers. The instrument will include digital maps to allow respondents convenient alternatives for specifying trip origins and destinations.

Administer Survey

The survey will be administered in accordance with the final survey plan. An initial pre-test will be conducted to provide field input on the questionnaire design and administration methods. The survey questionnaire and plan will be modified based on the pre-test results and the revised survey will be sent to full field. The fieldwork will be directed by a staff manager with field teams from M. Davis and Company and John J. Clark and Associates office in Philadelphia and Pittsburgh, respectively. The field teams will be responsible for organizing toll plaza distributions, recruiting participants by telephone and assisting respondents at activity centers. The staff manager will maintain tallies of survey progress and adjust the survey plan as necessary to ensure that the fieldwork is completed on time and within the allocated portion of the budget.

[1] See, for example, "Traveler Reactions to Congestion Pricing Concepts for New York's Tappan Zee Bridge," with W. Ristau and C. Falzarano, *Transportation Research Record 1659*, Transportation Research Board, Washington D. C., 1999.

Tabulate And Evaluate Survey Data

After the data collection is completed, descriptive tabulations of the data will be completed. Tabulations will be prepared for responses to each question and selected cross-tabulations will be prepared to evaluate relationships among key variables. These tabulations will include general information about the characteristics of the sample and of their responses to the stated preference experiments.

Stated preference data from the survey will be analyzed using accepted statistical techniques. The models will be estimated using ALOGIT, a widely used commercial software package that was developed specifically for this type of application. The route and time-of-day choice models will be of the multinomial logit model form described earlier and will be estimated in a way that produces individual-level preference functions and values of time.

Survey Trucking Managers

The objective of this task is to determine whether shipments would be rescheduled to avoid higher tolls during peak periods. While a focus groups approach could be used to accomplish this objective, it may be significantly more cost-effective to complete this task using structured phone interviews. We propose a set of structured interviews with open-ended components to allow for the wide variations in constraints and practices within the industry. M. Davis and Company will use trained survey staff to identify potential survey respondents and conduct these interviews.

An interview script will be developed, containing basic classifying questions about the trucking operation, followed by open-ended questions about likely response to time-of-day pricing schemes. The initial draft of the script will be provided for team review and comment. The questionnaire will be revised in response to these comments and the revised draft used.

A survey plan will be developed that ensures coverage of major trucking companies served by the Turnpike in the study's corridors. The interviews will be administered using trained survey staff from M. Davis and Company.

After the interviews are completed, descriptive tabulations of the data will be completed. Tabulations will be prepared for responses to each question

and selected cross-tabulations will be prepared to evaluate relationships among key variables. These tabulations will include general information about the characteristics of the sample and of their responses to the variable pricing concepts.

Conduct Customer Focus Groups

Customer focus groups will be used to determine likely reactions to value pricing alternatives and to test marketing/communications tactics. The focus groups are intended to cover both commercial and noncommercial customers in both of the pilot regions. To do this will require a minimum of three to four focus groups. M. Davis and Company will use its Philadelphia staff to recruit participants in that region and John J. Clark and Associates will perform similar service in the Pittsburgh region. A moderator with substantial past experience conducting value pricing focus groups will be used for all focus group sessions.

Up to four focus groups will be conducted, each consisting of 8-10 participants. The groups will be recruited by professional market research field agencies in each of the regions. The agencies will provide respondent recruiting and a facility with room set up for focus groups including a behind-the-mirror client observation room and videotaping.

A discussion guide will be developed for the focus group sessions. The guide will outline the objectives to be served by the groups, the topics to be covered within each 1.5 to 2 hour session and the approximate amount of time to be devoted to each topic. An initial draft will be developed for team review. This draft will be modified based on comments received and the revised draft will be used for the first session. The guide will be further revised as appropriate after the first session.

The focus groups will be conducted at facilities that are conveniently located, proximate to the Turnpike in each of the regions. The sessions will be held on successive nights. A summary report will be prepared describing the key observations from each session and the overall findings and implications of the participants' reactions.

Initial Marketing Program Efforts

A key element to success of any value pricing program is a well-planned marketing program. WSA is fortunate to have on our study team Frank Wilson & Associates (FW&A); the firm has been responsible for

innovative marketing programs for a number of value pricing programs and electronic toll systems throughout the U.S.

While much of the marketing effort will be discussed in Task 13, and will extend into Phase 2, it will be important to initiate marketing efforts early in the study, in Task 2. First of all, the market research and overall outreach program will provide important insights into patron sensitivities and preferences, which will then be used in developing the marketing program itself. Also, it will be important to implement an early public awareness campaign to promote the fact that PTC is soliciting customer feedback on alternative value pricing concepts.

In Task 2, members of the WSA team would meet with other toll agencies which would institute similar pricing initiatives to determine what outreach and marketing activities were implemented in their projects. By virtue of its extensive prior experience with the majority of toll facilities in the U.S., WSA brings to the study a close familiarity with what has been happening in the toll industry which will facilitate this project. FW&A has been actively involved with several agencies in marketing pricing strategies and ETC programs.

We will also interview key opinion leaders in the state, predominantly located in the Pittsburgh and Philadelphia areas, whose opinion will impact and influence the ultimate success of the project.

Benefit Testing – Benefit Testing is an integral part of the discovery process. It will allow us to properly position the PTC Value Pricing Pilot Project and establish strong claims to the most important benefits. Benefit testing will be conducted in the following forums:

- Integrated with the focus groups
- With state and local opinion leaders and agency officials, community, business and commuter groups and commercial vehicle managers in the Philadelphia, Pittsburgh and Lancaster County Regions of the Turnpike.

Stakeholder Interviews

Through a series of individual focused interviews with leaders representing a broad base of opinion in the Philadelphia, Pittsburgh and Lancaster County Regions of the Turnpike, we propose to find out what these leaders know and how they feel about the proposed value pricing project. We plan up to 20-30 interviews with the following; types of audiences:

- Local and state government elected and agency officials
- Community and business leaders

- Commuter groups
- Commercial vehicle managers
- Those identified in completed interviews as people we should also be speaking with

We will conduct Benefit Testing during approximately ten interviews. During the interviews, we would identify opportunities, obstacles, attitudes, opinions and values associated with the project. We would also identify the best ways to communicate with interviewees and with their constituencies in the future.

The interviews will reveal information important to the success of the project. The results of these interviews will help us to refine recommendations regarding appropriate media and messages and methods of communication. We will communicate the results in a written report, along with a list of interviewees.

Media Relations

The team will assist PTC in its early pubic awareness campaign by promoting the fact that it seeks customer feedback on the value pricing program. This will feature comprehensive media relations campaign that includes news releases, announcing the study and seeking public input, to the media in the region surrounding the designated value pricing areas (e.g. Pittsburgh and Philadelphia).

PTC/PDOT Publications

PTC wishes to keep stakeholders abreast of the Value Pricing Pilot Program. Continuing communications will help to remind audiences and create awareness that the project is moving forward. The team will produce stories and updates about the Value Pricing Pilot Program highlighting the benefits and major facts and statistics about the project.

Value Pricing Web Page

PTC supports the development of a special Web page for the project, which would be a sub-page on the Turnpike's Web site. The page would provide a simple explanation of the study, with the possible addition of a questionnaire and facts about congestion. The page would also provide a repository for study documents. PTC's IT person would coordinate hosting the page on the PTC Web site with FW&A providing design and preparation of content..

FW&A would facilitate any internal and external comment sessions for the introduction of the Web page to verify that all information needs of interested viewers are being met.

TASK 3: VARIABLE PRICING PROGRAM OPTIONS AND PRELIMINARY IMPACT ESTIMATES

The primary value pricing impact analyses in the Phase 1 study will be conducted in Tasks 3 and 4. In general, a more preliminary assessment of the potential impacts of a minimum of 12 alternative pricing strategies would be considered in Task 3, culminating in the development of a "short list" of a minimum of 6 preferred options to be subjected to more detailed analysis in Task 4.

As noted above, pricing strategies would be intended to:

- Provide an incentive to shift traffic out of peak travel periods in congested portions of the Turnpike; and/or
- Provide an incentive to encourage use of electronic toll collection (ETC).

Time of day pricing incentives will be limited to the designated value pricing areas around Philadelphia and Pittsburgh. Pricing strategies aimed at encouraging ETC use may be implemented systemwide. In addition, pricing strategies designed to encourage increased truck usage in the Lancaster region may also need to be considered, depending on strategies examined in a separate study of truck travel in the Lancaster County region being performed by others.

In practice, many pricing strategies which will be considered would simultaneously encourage use of ETC and also off-peak travel. WSA helped conceptualize the pricing strategies recently implemented on the New Jersey Turnpike, which accomplished both of these objectives. On that facility, which in many ways is similar to the Pennsylvania Turnpike (ticket system, heavy urban traffic volumes, heavy E-ZPass utilization, etc.) cash tolls were raised by 20 percent, coincident with implementation of E-ZPass. Tolls for E-ZPass users in peak periods were increased by 8 percent, on average, while tolls for E-ZPass users in off-peak hours were not changed at all. This pricing strategy was conceived as an alternative to a previously planned 10 percent "across the board" toll increase, specifically to encourage E-ZPass usage, and provide the basic framework for pricing incentives to encourage off-peak travel.

The results of the pricing strategy were quite positive. E-ZPass usage in peak periods exceeds 70 percent in many locations, within the first year of E-ZPass usage. There may have been a relatively small shift in time of day of travel, or at least a differential rate of growth between peak and off-peak periods. More importantly, a second, similar rate increase is planned for 2003, which will act to increase the price differential between peak and off-peak periods.

Based on the success of the New Jersey Turnpike program, the Port Authority of New York and New Jersey subsequently implemented a nearly identical program, which has also proven to be a success in increasing E-ZPass usage and some measure of traffic shift to off-peak hours.

In the preliminary value pricing study for Pennsylvania Turnpike, WSA analyzed four alternative Scenarios:

- Scenario 1 – In which cash tolls would be increased by either $0.25 or $0.50 during all hours while ETC tolls would be increased only during two morning and two afternoon peak hours while being decreased by the same amount, as compared to current levels, during all other hours of the day;

- Scenario 2 – Essentially the same as Scenario 1 except its peak periods were increased from two to three hours;

- Scenario 3 – Which included no differential between cash and ETC, but rather focused only on a peak period surcharge of $0.25 or $0.50 during the morning and afternoon peak, with no toll reductions or increases in off-peak hours; and

- Scenario 4 – Similar to Scenarios 1 and 2, however utilizing a stepped pricing strategy which included an ETC surcharge only during the highest peak hour of each peak period.

In this study, a minimum of 12 basic scenarios would be identified at the outset of Task 3 and subjected to preliminary evaluation. The scenarios would be based on different variations of the following parameters:

- The existing basic fare structure vs. an adjusted fare structure;
- Price differentials between cash and electronic toll collection;
- Price differentials between peak and off-peak periods in the designated congested areas;

- Alternative variable pricing time periods in the congested areas (e.g. 2 hour peak periods vs. 3 hours peak periods);
- Passenger vs. commercial vehicle applications of value pricing; and
- Possible special pricing strategies for motorcycles.

In addition, the scenarios identified will take into consideration the commercial vehicle fleet discount program, and any possible modifications thereto. Consideration will also be given to the potential for a toll discount program for motorcycles.

Each of the potential variations and criteria will be discussed, at length, with ETC staff at the kickoff meeting and early in the Phase 1 program.

Pricing strategies to implement time of travel may include both peak period surcharges and/or off-peak discounts. Indeed, the preliminary evaluation for Pennsylvania Turnpike conducted by WSA looked at both of these options. Peak period surcharges may encourage shifts to off-peak, but also may result in some diversions of traffic off the Turnpike all together, in response to the toll increase, for those motorists unable to shift travel time. Off-peak discounts would not result in diversions off the Turnpike, but may well result in reductions in revenue during off-peak hours which will be an important criteria of evaluation. Turnpike staff has repeatedly indicated a compelling need to at least maintain revenue neutrality, if not revenue enhancement, under any of the pricing initiatives.

In evaluating the effect of peak period surcharges, two parallel modeling efforts will be needed. As part of its ongoing Turnpike operation study, WSA has developed a systemwide Turnpike travel demand model which can be used to test the affect of toll increases on traffic diversions to alternative routes. A parallel model then is also used to evaluate the potential for time of day shifts. In the preliminary Task 3 efforts, maximum use would be made of any interim data which can be obtained from the Task 2 market research efforts. However, the bulk of this would likely not be available until the more detailed analysis in Task 4.

The impacts to be evaluated with respect to each of the toll pricing options include:

- Overall passenger and commercial vehicle traffic volumes;
- Traffic operational impacts including safety, delays and congestions, on the Turnpike mainline, at toll plazas and at key off-Turnpike locations;

- The preliminary assessment of potential revenue impacts and fare collection system measures;
- Initial estimates of the cost of implementation, both capital and operating;
- Preliminary estimated net revenue impacts; and
- A general assessment of potential economic effects on shipping and industry, general socioeconomic issues and environmental considerations, if any.

The Task 3 work program would be more general in nature, intended primarily to screen the various alternatives to a short list for more detailed analysis in Task 4. Maximum use would be made of analytical techniques, and models, developed by WSA in prior studies, while making maximum input of any market research information available at the time of the Task 3 work.

TASK 4: REFINED VARIABLE PRICING PROGRAM OPTIONS AND IMPACT ESTIMATES

Following the completion of Task 3, a minimum of six preferred pricing options would then be refined for more detailed analysis. The six alternatives would, of course, be based on variations of passenger vs. commercial vehicle applications, systemwide cash vs. ETC differentials and time of day surcharges or discounts in congested urban areas.

The various impact items discussed in Task 3 would be evaluated in considerably more detail in Task 4. Task 4 would have the benefit of the detailed market research effort in Task 2. This would include refined time shift elasticities and values of travel time from the stated preference surveys, an indication from major employers and trucking companies regarding the ability to potentially shift travel time, focus group results and more.

Where applicable, WSA would use its TOLLSIM model to evaluate in more detail toll plaza operational impacts associated with the pricing strategies. Traffic impacts on alternative routes, both related to time shifts as well as traffic diversions, would be identified in more detail.

Detailed estimates of increased market shifts to E-ZPass would be made systemwide. Estimated annual traffic and revenue impacts, due to both E-ZPass shifts as well as potential time of day shifts in urban areas would be prepared for each scenario. More detailed estimates of net revenue impacts would also be determined, using operating and capital cost inputs developed in parallel tasks.

A more detailed assessment of economic affects on trucking and industry would also be undertaken. Socioeconomic considerations, including gender and income equity issues, would also be addressed for the preferred alternative. Potential environmental impacts, if any, would be identified.

At the conclusion of Task 4, one or more final preferred variable pricing programs would be identified for suggested use in the Phase 2 pilot programs.

TASK 5: EVALUATION OF FARE COLLECTION SYSTEM CAPABILITY TO ACCOMMODATE VARIABLE PRICING

The Pennsylvania Turnpike primarily employs a closed ticket system of collection. Its toll collection system has been upgraded, over the years, and recently E-ZPass has been implemented systemwide for passenger cars. E-ZPass would be implemented for commercial vehicles in the near future as well.

The implementation of variable pricing can present unique challenges for a toll collection system. If the variable pricing at the time of day-based variable pricing is limited only to electronic toll customers, technology issues should be relatively limited. These types of programs have been successfully implemented on the New Jersey Turnpike, PANYNJ Bridges and Tunnels, and other facilities in the U.S. Toll rates and electronic toll collection can be handled by computer at the transaction level with little direct impact at the toll plaza itself. It may require implementation of variable message signing, however, it will alert motorists of the current rate levels in affect.

If peak vs. off-peak price differentials were to be extended to cash as well, more significant fare collection challenges might result. This could have a more direct impact on audit requirements and capabilities as well as communications with toll plaza staff and cash customers.

Early in the study, WSA would establish appropriate contact with the ETC department and the fare collection department. Information would be obtained regarding the design of the current system, as currently operating, as well as the planned enhanced fare collection system expected to be operational by late 2002.

Discussions would be held with staff to identify key issues and challenges which staff will need to be evaluated during the course of the work. WSA will also look at how other agencies have dealt with variable pricing for both cash, electronic and, if needed, cash systems.

WSA maintains an entire subgroup dedicated to the planning and design of electronic toll collection systems and overall toll operations. The firm has been involved with such innovative, state of the art toll systems as the City Link fully electronic toll system in Melbourne, Australia, and the I-15 Value Pricing Demonstration project in San Diego. In fact, WSA developed the original specifications for the I-15 system, which employs the world's only example of fully dynamic pricing where toll rates are adjusted almost continuously based on measured levels of traffic demand. WSA is presently developing design plans for a significant expansion of the I-15 system to include mileage-based dynamic pricing in a fully electronic manner.

WSA will provide recommendations to staff regarding potential modifications, hardware or software, which might be needed to accommodate variable pricing. This would include:

- Potential audit issues, particularly if variable tolls are provided for cash and electronic customers;
- Variable message sign requirements and other hardware changes a the plaza levels to advise motorists of toll rates currently in affect; and
- Issues related to the IAG clearing house operations and/or other needs for coordination with parallel toll agencies.

TASK 6: COORDINATION

An important key to success in this study will be close coordination with Turnpike staff, PennDOT, FHWA and various other agencies. This would include:

- Appropriate municipal planning organizations, such as DVRPC and SPC;
- Affected municipalities;
- The Wilmington-Harrisburg Freight Study being conducted for Lancaster County;
- Adjacent toll agencies, such as the New Jersey Turnpike Authority or possibly DRPA and the Ohio Turnpike; and
- General traffic and revenue studies underway by PTC.

It is understood that the Wilmington-Harrisburg freight study is intended to look at possible solutions to heavy truck traffic in the P.A. 283/U.S. 30/P.A. 41 corridor between Wilmington and Harrisburg. One possible solution may involve some type of truck toll price incentives on the

Turnpike to encourage a shift of trucks to the Turnpike for a longer portion of their trip.

WSA is also conducting the Lancaster County study. We will closely coordinate with that study, and, in consultation and coordination with the PTC management team, test truck pricing strategies on the Turnpike which might be suggested as part of the Wilmington-Harrisburg study. At this time, it is not possible to specifically identify the strategies to be evaluated, if any.

In terms of coordinating with adjacent toll agencies, in particular the New Jersey Turnpike, this will be facilitated by ongoing work performed by WSA for that agency. WSA serves as traffic and revenue consultant to NJTA, and has recently completed a well-publicized E-ZPass impact analysis which showed a substantial reduction in toll plaza delay (about 85 percent) associated implementation of the value pricing study and E-ZPass on the Turnpike. This ongoing relationship with NJTA will foster a high level of coordination between Pennsylvania Turnpike and New Jersey in the evaluation of potential pricing strategies, particularly in the Philadelphia area.

TASK 7: COST ESTIMATES

This task will involve the preparation and refinement of cost estimates related to implementing the variable pricing scenarios on the Pennsylvania Turnpike. This would include, but not necessarily be limited to:

- Any required civil works at the toll plazas, such as signing or striping;
- Any required equipment changes, such as variable message signing at either toll plazas or on the Turnpike mainline;
- Any required changes to the ETC and/or fare collection systems;
- Potential impacts on operating costs, particularly toll operations, as a result of the pricing strategies;
- Ancillary costs, such as toll ticket printing and related changes; and
- Other implementation costs, such as program marketing, administration and management, etc.

TASK 8: PRELIMINARY PLANS

In Task 8 preliminary layout sheets would be developed depicting signs, markings and any proposed modifications to highway and toll plaza infrastructure that are necessary to accommodate the Phase 2 pilot implementation program. WSA has extensive experience in toll plaza

planning design, including the recent design of new toll plaza facilities for the Pennsylvania Turnpike Commission by our Pittsburgh office.

Plans will be presented in a format agreed upon at the outset of the study, and will be sufficient to generally depict the proposed installation, including preliminary sign legends. It is expected that the implementation of variable pricing will require relatively few physical changes to the Turnpike, beyond fixed legend or variable signing and possibly some striping. However, this will be refined during the course of the analysis.

The preliminary plans developed in Task 8 will, of course, be used in preparing the cost estimates discussed previously in Task 7. The plans would be submitted in draft form and subject to review and approval by Turnpike staff.

TASK 9: STUDY REPORT, INCLUDING RECOMMENDED PILOT PROJECTS

Task 9 will include development of draft and final study reports which will fully document the Phase 1 efforts conducted in Tasks 1 through 8. The report will incorporate, to the extent possible, various technical memoranda and other interim submittals made during the course of the work. In addition to discussing the various pricing alternatives and analytical methodology, the report will fully document the results of the evaluation of the various scenarios. This will include appropriate comparative evaluation matrices and the overall approach used in determining the preferred alternative(s).

The report will also include recommendations as to the number and nature of the pilot project or projects to be suggested for implementation during Phase 2. For each recommended pilot project, the report will include, as a minimum, the following:

- The cost of implementation and operation;
- Estimated traffic and revenue impacts;
- Estimated operational impacts and considerations;
- Estimated socioeconomic and environmental impacts for consideration;
- Any required modifications for the PTC fare collection system; and
- A preliminary recommended public outreach and marketing program, subject to considerable refinement during Task 13.

The reports would be submitted in draft form for review and comment to the project team. The report content would be presented to Turnpike staff, and the Commissioner members if desired. Any comments received

would be incorporated in the final study report. In addition to an agreed upon number of final printed copies, WSA would also provide camera-ready originals and electronic versions in Microsoft Word, Excel and Power Point.

TASK 10: SCOPE OF WORK FOR PHASE 2

In this task, a specific scope of work for each of the recommended and approved Pilot Projects would be developed. This would include the scope of the WSA consultant team efforts during Phase 2 as well as all other work tasks necessary to conduct each of the pilot programs.

The scope of work would include an estimate of all costs, including both capital and operating costs associated with each of the pilot projects. It would also include budget estimates for the ongoing consultant support efforts during Phase 2.

Special attention would be given to ongoing public outreach and marketing tasks. This is expected to be significant during Phase 2, to ensure proper public understanding of the pilot project or projects as well as related advertising and promotional materials.

The product of Task 10 would be a technical memorandum submitted within about two months following the final Phase 1 report and approval of the pilot projects by Pennsylvania Turnpike staff.

TASK 11: MONITORING AND EVALUATION PLAN FOR PHASE 2

Prior to actually implementing each pilot pricing project, it will be important to establish a monitoring and evaluation plan. Of necessity, this will need to include a review of the base line operating characteristics which essentially constitute the "before" conditions. The monitoring and evaluation plan will likely include a continuous review of various items, including:

- Traffic impacts at toll plazas and on the Turnpike mainline, both in terms of total daily traffic changes as well as shifts in time of travel from peak to off-peak conditions;

- Traffic impacts on alternative routes, both by time of day and, in the case of possible diversions, on a daily basis;

- Observations regarding changes in operating characteristics at toll plazas, including impacts on delay (both entering and exiting) as well as normal traffic operational and safety considerations (e.g. vehicles accelerate or delay arrival and departure at toll plazas, or

perform other erratic maneuvers, in the immediate proximity of an anticipated toll rate change);

- Follow up market research efforts, such as "revealed preference" surveys including some of the same participants in the stated preference survey, to evaluate actual performance after the price change as compared with predicted behavior before the change;

- Surveys or other techniques aimed at determining potential socioeconomic impacts, including to the extent possible, identification of any equity issues; and

- A quantification of the net benefits to Turnpike patrons and Turnpike operations of the Phase 2 pilot implementation program(s), by comparing conditions before and after implementation of the pricing strategy.

The plan will be submitted in draft form for review and approval, well before actual implementation of the Phase 2 pilot. The approved plan will then be followed during the Phase 2 evaluation.

TASK 12: ENVIRONMENTAL CLEARANCE/PERMITS

Implementation of a value pricing program, or other type price differential between cash and electronic toll collection, is primarily a toll rate decision and would not be expected to have significant environmental impacts. Only a limited amount, if any, physical modifications would be required on the Turnpike, and most would involve implementation of signing changes. The pricing programs could, however, be expected to have some traffic impacts, both in terms of shifts and time of day as well as possible diversions to alternative routes or modes for some potential pricing strategies.

This task would include a general review of environmental issues associated with the pricing strategies. WSA would prepare a Categorical Exclusion Evaluation (CEE). Based on information provided by PTC, and WSA's knowledge of the Turnpike and the potential pricing programs, it is anticipated that a Level 2 Categorical Exclusion Evaluation would be required.

The CEE will document any expected environmental impacts of the project. Each of the categories included on PennDOT's CEE form will be addressed. Any permits which might be required would also be identified.

Any supporting documentation that may be required for the CEE will be identified and attached to the CEE, including technical reports and agency approval letters. Any mitigation measures that are to be incorporated into the project's design documents would also be detailed in the CEE.

The CEE would be prepared utilizing PennDOT's electronic CEE format in accordance with the PennDOT publication "Categorical Exclusion Evaluation Handbook, Publication No. 294," with revisions through September 2001. The Level 2 CEE would be submitted to permit approval before the Phase 2 pilot implementation begins.

TASK 13: PRELIMINARY PUBLIC OUTREACH AND MARKETING FOR PHASE 2

Value pricing is a concept that is familiar in some contexts (air fares, long distance rates) and yet seems completely foreign to the public in others - like toll roads and bridges. Understanding what the public values most, and translating the benefits of value pricing into those terms has been the task of Frank Wilson & Associates for projects across the United States.

For the Pennsylvania Turnpike, FW&A will build on the experience of past projects to ensure the successful implementation of value pricing in identifying the pilot project and implementing value pricing through an integrated marketing and outreach program. A graphic overview of the proposed PTC outreach and marketing program is shown in Exhibit 4.

The key elements of the program include:

Branding – While transportation services may generally be taken for granted, the brand and identity of the Value Pricing Pilot Program must be precisely clarified in order to clearly state its value and benefits to two groups:

- Key opinion leaders whose views or opinions could influence or affect the timely implementation of the project.

- The key groups whose understanding and acceptance of the program will be crucial to its ultimate success.

How will this program benefit the commuters, commercial vehicle operators, local businesses and employers and local communities served by the Turnpike? How does this program ensure a more convenient, safer and timelier commute? Identifying the Turnpike Value Pricing "brand" – its unique position in peoples' minds – will help clarify these questions and better position PTC to carry out its mission and implement this important program with greater public understanding and support.

Frank Wilson & Associates, Inc will employ its Precision Point Branding™ process to determine precisely where the Value Pricing Pilot Program fits in the minds of opinion leaders in the identified regions served by the Pennsylvania Turnpike Commission. This same process was applied to the highly successful introduction of value pricing on the LeeWay, I-15 Express Lanes and 91 Express Lanes value pricing projects as well as to the successful introduction of E-ZPass on Regional Consortium member facilities in New Jersey and Delaware, and on the West Virginia Turnpike.

The Precision Point Branding process allows a public agency to align its outreach program and message with important public values. It allows the agency to effectively capitalize on the benefits commuters, business owners and the general public find most appealing and to build a comprehensive public information and community outreach program to achieve its goals.

The process will provide PTC with fact-based conclusions that can then serve as a benchmark for Phase 1 public outreach efforts and a marketing program to support the Phase 2 Value Pricing Pilot Project Once complete, we will have identified the benefits that are most appealing to commuters, residents and opinion leaders. We will have also identified possible threats and obstacles to the program and uncovered potential new opportunities.

Benefit Testing – Benefit Testing is an integral part of the discovery process. It will allow us to properly position the PTC Value Pricing Pilot Project and establish strong claims to the most important benefits. Benefit testing is discussed under Task 2.

Brand Triangle – Once the Precision Point Branding process is complete and we have analyzed the results, we will construct the Value Pricing Brand Triangle. The Brand Triangle will define the project's attributes and "personalities", and the core value statement that should constitute the heart of PTC Value Pricing Project image. The results will be incorporated into the following

- A Value Pricing Pilot Project logo;
- Project slogan or tag-line; and
- Key message and copy points for the project.

This process will also reveal the topics that must be communicated to clarify issues of importance to opinion leaders, commuters, commercial vehicle managers and the general public.

Outreach and Marketing Plan - The recommended branding, positioning and messages will be incorporated into a comprehensive public outreach plan and a marketing communications plan for the project to guide the the Phase 2 Marketing program. The plan will integrate the brand throughout the marketing, advertising and outreach activities, events and materials. This plan will include the following elements:

- Mission and Objectives
- Marketing Strategies and Tactics
- Identification of Key obstacles and Opportunities
- Messaging Platform
- Identification of Key Audiences
- Identification of Key Marketing Activities
- On-Facility Marketing Plan
- Advertising and Media Plan
- Public and Media Relations Plan
- Special Events Plan
- Internet Applications
- Distribution Plan

PHASE 1 - Public Outreach: Provide public outreach, marketing, advertising and public relations support during pre-implementation – During Phase 1 (including both Tasks 2 and 13), FW&A will handle any required advertising, marketing and public relations activities as required from the onset of the Value Pricing Pilot Program.

The following program elements to support Phase 1 are suggested:

- Assist PTC in implementing a public awareness campaign – The team will promote the fact that the PTC seeks customer feedback on the value-pricing concept. This will feature a comprehensive media relations campaign that includes news releases to the media in the areas surrounding the designated regions and stories in the Turnpike Traveler publication.

- **Media Relations** –The media provides a valuable communication opportunity if used effectively. Because news stories and editorial treatments are considered by most readers to be objective third-party opinions, the credibility of news stories is understandably

high. Additionally, the media provides an opportunity to move our messages to the widest public audience. The media press kit described in Task 2 will be updated and a modest media relations program would be developed to garner positive media coverage for PTC and the Value Pricing Pilot Program. . Tactical elements could include:

- Key Milestone Media Briefings
- Additional Press Releases

- **PTC/PDOT Publications (A portion of this section has been moved to Task 2 to support the beginning stages of the study)** – Utilizing existing PTC and PennDOT communications during this phase is important to keep stakeholders abreast of the Value Pricing Pilot Program. Continuing communications will help to remind audiences and create awareness that the project is moving forward. The team will produce quarterly stories and messages about the Value Pricing Pilot Program and follow-up on placement of articles highlighting the major facts and statistics of the project.

- **Support Advertising** - The marketing team has 20 years of experience meeting the advertising needs of transportation service providers and toll facility operators. If there is a need to conduct advertising during the Phase 1 portion of the Value Pricing Pilot Program, we are prepared to meet those needs whether in print, broadcast or new media.

- **Brochure** – It is important to create a brochure that will be able to stand on its own as an informational tool. After the core values have been expressed, FW&A will design, print and distribute a brochure on value pricing that incorporates the new slogan and logo for the project. The brochures can be disseminated via mail, customer service centers and tollbooths throughout the Philadelphia and Pittsburgh regions. An initial printing of 5,000 brochures is recommended.

- **Press Kit** – We propose an all-purpose press kit for use with community leaders, employers and the news media. The kit would include the following:

  - Brochure

- Fact Sheets
- Infographic
- Q & A Sheet

- **Web Page** – During this phase, we propose to make any necessary revisions to the Value Pricing Web page. This includes any new information and graphics for the program that might not have been available in the original production of the Web page. This will also take into account any internal or external critique of the information presented.

Phase 2 – Preliminary Public Outreach And Marketing

The most important portion of the Precision Point Branding process is the Connecting Phase where PTC makes memorable and effective contact with those who are impacted by the program and who will take advantage of the program.

Before the completion of Phase 1, the team will meet with PTC to verify that all goals and objectives for that Phase have been met. A summary report will be written, explicitly detailing every aspect of Phase 1 and also make any additional recommendations to the Phase 2 Marketing Plan to be carried out to support the introduction of the Value Pricing Pilot .

In an effort to make a maximum impact, the following deliverables will be produced during the Phase 2, or Connecting segment of the communications plan:

- **Develop an identity logo and slogan -** Upon completion of the Brand Pathway testing, these results, along with the findings from the initial research will be synthesized into a Brand Triangle that identifies the personality, attributes and core value of the Value Pricing Pilot Program. With a clear understanding of the Value Pricing Pilot Program's brand triangle, the communication strategic plan's message or slogan will be directly derived from the benefits found to be of greatest value to PTC's key audiences. These will in turn be incorporated into all marketing materials for the Value Pricing Pilot Program. A logo and slogan will then be designed to match the core value of the Value Pricing Pilot Program.

- **On-Facility Marketing** – There is a tremendous opportunity at every toll plaza to reach the largest amount of our intended audience. To make a maximum impact, the marketing plan may propose the following:

  - In-lane Handouts - Brochures could be developed for distribution at toll plazas to commuters and commercial vehicle operators who use the turnpike. These brochures would briefly discuss the Value Pricing Program and point out the convenience and advantages of using an E-ZPass transponder to take full advantage of the program. The brochures would also provide information about traveling the Turnpike during "off-peak" hours and an application that can be used to sign up for E-ZPass. Two different types of applications would be available for:

    Commercial use
    Commuter use

  - Toll Collector Training – The toll collectors have the largest amount of "face time" with commuters, hence they need to be able to convey the proper messages. Brief shift change training sessions would be conducted for toll collectors that provide them with the appropriate information and messaging about the program. Brochures and other information distributed at the tollbooths could also drive additional traffic to the turnpike Web site.

  - Service Area Point-of-Purchase – The distribution of eye catching banners and point-of-purchase displays with project information and E-ZPass applications at each service area along the Turnpike. These displays could be equipped with all information necessary to educate commuters of the advantages of traveling the corridor during off-peak hours and for using E-ZPass transponders to take full advantage of the Value Pricing Program. Applications could also be made available for motorists to sign up for EZPass and receive a transponder.

- **Develop an advertising campaign to support the introduction of the Value Pricing Pilot Project -** FW&A will develop a comprehensive and integrated advertising campaign to support the introduction of the pilot project. In Task 2, we will develop and test appropriate messages for use in the advertising program in

identified PTC regions of Philadelphia and Pittsburgh. The winning messages will be used in the media that will be identified in a media plan portion of the marketing plan. The media plan will likely focus on drive time radio and print advertising, but will not rule out such formats as cable TV and television spots and Web site ads that will drive Internet traffic to the official Turnpike Web site, www.paturnpike.com.

- **Develop a plan for utilizing existing turnpike media –** Utilizing the existing media that are produced to support the PTC, and the Turnpike itself, is an effective way to reach the intended audiences. The marketing plan will spell out opportunities for production of stories and messages about the Value Pricing Pilot Program to be placed in the Turnpike Traveler newspaper, Highway Advisory Radio, Variable Message Signs and the Turnpike Web Site to allow a free and clear communication of objectives and goals of the Value Pricing Pilot Program with travelers.

TASK 14: PROJECT MANAGEMENT

WSA is committed to a high level of continuing project management and coordination throughout the work. Specific staffing and management plans are discussed in more detail in Part 2 of this submittal.

Task 14 would include efforts related to project management, this would include monthly status meetings in Harrisburg or elsewhere as defined by Turnpike staff. A detailed project schedule would be developed at the outset of the work, and discussed at the project kickoff meeting. This schedule would be continually reviewed and updated as required. Written monthly progress reports would be submitted throughout the course of the work, and all will use the master project schedule as an important referencing tool.

Quarterly progress reports will also be submitted, including two reproducible hard copies and one electronic copy as required in the scope of work. The quarterly progress reports would be submitted on or before the 20th day of the month following the end of each quarter. Among other things, the quarterly report will include:

- The federal-aide contract number, project name, a brief description of the project, appropriate management contacts, etc.;

- Budget and scheduling information, including project initiation date, the estimated completion date, cost estimate, expenditures during each quarterly period, etc.;

- An action plan, updated quarterly would be provided, describing all the steps needed to successfully complete the project within the time frame available;

- A brief description of activities conducted during each quarterly reporting period, including any milestones obtained or other significant events; and

- A discussion of any problems encountered or anticipated, together with recommended solutions to such problems and any potential impacts on project milestones or schedule.

A final progress report would be submitted to the Commission on or before six weeks following completion of the Phase 1 project.

TASK 15: MEETINGS

Monthly progress meetings at the Commission Administration Building in Harrisburg will be held throughout the life of the project. WSA will prepare minutes of each of the meetings within five working days and distribute to all concerned parties involved in the meetings. The WSA team will also prepare materials to assist the Commission in conducting necessary public meetings for the project, as required to complete Phase 1 and prepare for pilot program implementation in Phase 2.

The WSA project manager and other appropriate staff members will attend all monthly progress meetings, unless specifically excused by the PTC project manager. In addition, the WSA project principal will attend several of the regular monthly meetings, and all major presentations to the Commissioners, or others outside Turnpike staff.